



**Percent of Impaired Waters - 2000**



## Water Quality: Ensuring A Safe Environment And Sustainable Agriculture

**The system of laboratories** and instrumented watersheds managed by the ARS Watershed Science research program provides a unique capability to address the technical challenges of water pollution control. Unique features of the ARS program include

**Over 40% of assessed waters are still too polluted** for fishing or swimming even after 28 years of pollution control efforts according to a report compiled by state environmental agencies. The states assessment reveals that:

- 218 million people live within 10 miles of an impaired water body
- 21,000 water bodies nationwide do not meet use standards
- 300,000 river and shore miles are impaired
- 5 million lake acres are impaired
- 45 legal actions have been taken in 37 states

- A system of watersheds from which historic data have been gathered during years of monitoring. These data may be used in predicting the transport and fate of sediment, nitrogen, phosphorus, pesticides, and bacteria.
- Models, expertise, and data that allow the evaluation of the impacts that alternative land management may have on the watershed eco- system.
- Laboratory facilities suitable for development and testing of management practices that limit pollutant transport.



**The Clean Water Act requires States** to (1) identify waters not meeting State water quality standards, (2) set priorities for TMDL (Total Maximum Daily Load) development, and (3) develop a TMDL for each pollutant for each impaired water body. A TMDL is the amount of a pollutant that a water body can receive and meet water quality standards. Ninety percent of all impairments cite non-point sources as a major cause of pollution. These non-point sources include excess sediment, nutrients, pesticides and harmful microorganisms.

**Technology required to assess** the impact of land and water management on impaired water bodies is being developed by the Agricultural Research Service (ARS), which is the research arm of USDA. ARS, US EPA and State environmental agencies have cooperated in the development of best management practices for pollution control and computer models for assessment of management scenarios.

**The USDA watershed network** has been a success for both agriculture and society as a whole. Continued cooperation between ARS and environmental agencies will result in continued success through development and application of technology that economically protects and provides for the needs of our society and environment.



*This fact sheet was produced by the ARS National Program on Water Quality and Management. For additional information call (301) 504-7987*

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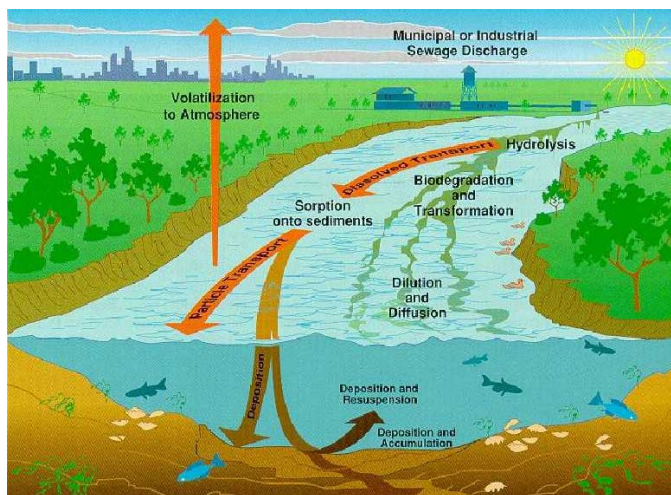
Water quality is becoming an increasing national concern and pollution from agricultural land is coming under close scrutiny. ARS research is allowing farmers to maintain or improve productivity while preserving the environment.

ARS research has resulted in procedures for prediction of erosion and sedimentation rates for varying land uses, soil types and management practices.



ARS research on fertilizer and animal manure management on watersheds has resulted in improved water quality and higher crop yields for farmers.

Computer models developed by ARS have been approved for use by U.S. EPA and are currently being used by consultants and state environmental agencies in developing strategies to meet water quality standards.



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